

## WISCONSIN ENDANGERED RESOURCES REPORT 18

### WISCONSIN BALD EAGLE BREEDING SURVEY, 1985

by Charles Sindelar, Randle Jurewicz, and Charlene Gieck

---

#### SUMMARY

Based on aerial surveys during March through May, and ground checks of all known active nests in June, Wisconsin supported 214 active bald eagle (*Haliaeetus leucocephalus*) territories in 1985. Of these, 171 (80%) were successful, producing a total of 282 young ( $\bar{x}$  = 1.3 young per active nest), similar to last year's number of young produced. We banded 259 young, 8 of which were removed and furnished to reintroduction projects in other states. Although eagles along Lake Superior continued to experience poor production, overall the state population is reproducing well and is increasing slowly.

Management recommendations were developed and updated for individual territories. Of 9 reported bald eagle injuries, 5 were from traps. Of 24 reported deaths, the majority were from unknown causes, 5 were from trauma, and 6 were from other known causes such as emaciation, disease, and toxicity. During the annual midwinter count, 138 participants recorded a total of 211 bald eagles.

We recommend continued aerial surveys.

---

BUREAU OF ENDANGERED RESOURCES  
Wisconsin Department of Natural Resources  
Box 7921  
Madison, WI 53707  
608-266-7012

October 1985



Wisconsin Department of Natural Resources  
Bureau of Endangered Resources  
Box 7921  
Madison, Wisconsin 53707

PERFORMANCE REPORT

State: Wisconsin Project Title: Wisconsin Endangered and  
Cooperators: States of Michigan, Illinois Threatened Species Investigation  
Project No.: E-1 Study Title: Status and Management of Bald Eagle  
Study No.: 211  
Period Covered: October 1, 1984 to September 30, 1985

Contents

Job 211.1 Conduct Survey  
Job 211.2 Search for Active Nests  
Job 211.3 Development and Implementation of Management Plans  
Job 211.4 Erection of Artificial Nesting Platforms  
Job 211.5 Nest Visits and Banding of Young  
Job 211.6 Salvage of Individuals or Addled Eggs  
Job 211.7 Winter Inventory

Abstract

The Wisconsin Department of Natural Resources continued its bald eagle (Haliaeetus leucocephalus) management program. It is designed to monitor population trends and increase productivity by describing, protecting, supplementing and enhancing nest sites. Territory management plans which identify both immediate and long-range management needs are being developed for all territories in the state. A statewide nest activity survey in March and May located 214 active nest sites. Leg bands were placed on 259 nestlings. Eight eaglets were furnished to reintroduction projects in other states.

Job 211.1 Conduct Survey

Objective

Monitor known bald eagle territories through annual aerial surveys to determine population trends and nesting success.

Procedures

See the Methods section of the attached report by Charles Sindelar, "Wisconsin Bald Eagle Breeding Survey - 1985".

## Findings

### North Central District

New nests occurred in Lincoln, Forest, Langlade, Marathon, Oneida and Vilas counties.

	'73	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85
Active territory	43	58	59	75	77	74	72	82	83	85	86	86	87
Successful territory			40	44	59	53	49	62	61	61	71	65	70
% success			67%	58.6%	73%	72%	68%	77%	73%	72%	83%	74%	80%
Total young	53		70	69	98	93	76	115	101	106	114	106.6	119.7
Young/active territory	1.2		1.2	.92	1.3	1.3	1.05	1.4	1.2	1.2	1.3	1.2	1.4
Young/successful territory			1.2	1.6	1.7	1.7	1.55	1.85	1.7	1.7	1.6	1.6	1.7

### Northwest District

New nests were found in each county of this district. Those nesting on Wisconsin's mainland shore of Lake Superior were not as successful as 1984. Fewer eagles showed up at nests and fewer pairs nested. Fewer young were raised and again young died mysteriously in nests prior to fledging.

	'73	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85
Active territory	40	25	47	64	67	58	70	84	93	106	95	120	109
Successful territory			25	42	46	39	52	62	68	73	53	90	87
% success			53%	65.6%	67%	67%	74%	73%	73%	69%	56%	75%	80%
Total young	34		35	45	78	67	94	103	113	125	118	147.2	141.6
Young/active territory	.85		.74	.70	1.2	1.1	1.34	1.2	1.2	1.2	1.2	1.2	1.3
Young/successful territory			1.4	1.07	1.6	1.7	1.8	1.7	1.7	1.7	2.2	1.6	1.6

### Lake Michigan District

New nests were found in Marinette and Menominee counties.

	'73	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85
Active territory	6	6	5	6	6	6	5	6	7	10	10	10	9
Successful territory			4	1	2	4	4	5	6	7	6	7	6
% success			80%	2%	33%	67%	80%	83%	88%	70%	60%	70%	67%
Total young	0		7	2	4	6	8	9	10	14	12	13	8
Young/active territory			1.4	.3	.67	1.0	1.6	1.5	1.4	1.4	1.2	1.3	0.9
Young/successful territory			1.75	2.0	2.0	1.5	2.0	1.8	1.7	2.0	2.0	1.85	1.3

### West Central District

New nests were found in Buffalo and Dunn counties.

	'73	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85
Active territory						1	2	2	4	5	5	7	8
Successful territory						0	1	1	1	3	2	6	6
% success							50%	50%	25%	60%	40%	86%	75%
Total young						0	1	2	1	3	3	10	9.6
Young/active territory							.5	1.0	.25	.6	.6	1.4	1.2
Young/successful territory							1.0	2.0	1.0	1.0	1.5	1.7	1.6

### Southern District

The Southern District's only nest continued to be active in 1985.

	'73	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85
Active territory				1	1	1	1	1	1	1	1	1	1
Successful territory				1	1	1	1	1	1	1	1	1	1
% success				100%	100%	100%	0	100%	100%	100%	100%	100%	100%
Total young				2	1	2	0	2	2	3	2	2	2
Young/active territory				2	1	2	-	2	2	3	2	2	2
Young/successful territory				2	1	2	-	2	2	3	2	2	2

## Statewide

See the summary section of the attached report by Charles Sindelar, "Wisconsin Bald Eagle Breeding Survey - 1985".

### Job 211.2 Search for Active Nests

#### Objective

Search for new and previously undiscovered nests in areas of the northern lakes breeding range that may contain active territories.

#### Procedures and Findings

Sindelar, Daniel Doberstein and Raymond Marvin conducted two aerial nest checks, one in April and one in May. Anthony Rinaldi and Howard Sheldon checked the Chequamegon and Nicolet National Forests in April.

Twenty new territories were numbered and 25 new nests were located within previously known territories.

Sindelar also searched the Apostle Islands, discovering no new nests, but existing sites were successful in 1985. Three pairs nested, producing 2 young. A fourth pair was discovered and showed some activity.

### Job 211.3 Development and Implementation of Management Plans

#### Objective

Develop and implement management plans for all active territories.

#### Procedures and Findings

Concise information sheets have been developed by Area Wildlife managers for territories using a standardized format. These information sheets facilitate identification of future Management needs on an individual territory basis. Ground checks of each territory were required and the following information recorded:

1. Nest tree and habitat characteristics.
2. A green-line map, or a copy of an aerial photo showing the exact location of the nest and all alternate nests.
3. Identification of all roads, trails and dwellings.
4. Recommendations to reduce disturbance factor such as closing or rerouting of trails, limiting timber harvest or limiting recreational development on public lands.
5. Reproductive histories.

Information sheets and management recommendations were compiled for 20 new territories and known territories were reviewed and updated with 1985 data.

### Job 211.4 Erection of Artificial Nesting Platforms

#### Objective

Increase bald eagle productivity by constructing artificial nesting platforms to replace defective nest trees, blown-down nests and other deteriorated nesting habitat.

#### Procedures

Bald eagle productivity can be increased by improving existing nests, providing nesting structures and by protecting alternate nest sites. The platform design used was developed by the WDNR, and has proven to be very durable and successful.

During the last several years, the WDNR have erected nest bases. These structures are intended to simulate an eagle nest and to keep eagles nesting in protected locations. The nest bases are used to replace eagle nests which have blown out. Once a nest blows out, the eagles may not build a new nest for several years, or may move to a new location.

The nest base consists of a cone-shaped, heavy-duty wire mesh which is securely attached to one side of a white pine. The cone is approximately two feet high and filled with sticks like a nest. The cone is placed just below the location of the old nest. Eagles then build on this base and tie their nest into the support branches.

#### Findings:

In 1978-1979 we put a nest base in La-3b, Rolling Stone Lake. The property had just been purchased by Fish Management when the nest blew out and we wanted to keep the eagles at this protected location. The nest base worked and two young were raised in 1979 and again in 1980. The territory had "some degree of activity" in 1981, it was not used in 1982, active but unsuccessful in 1983, inactive in 1984. The platform at BU-14a, Grettum Flowage, maintained a new nest in 1984 which produced one young in 1984 and 1985. The platform at IR-25a, Flambeau Flowage, was inactive in 1984 and failed in 1985; ON-34 produced 2 young in 1984 and 1985; VI-7 was inactive in 1984 and 1985.

#### Job 211.5 Nest Visits and Banding of Young

##### Objective

Monitor migratory movements, population dynamics and other ecological parameters of bald eagles through nest visits and banding of nestlings.

##### Procedures and Findings

See attached report by Charles Sindelar, "Wisconsin Bald Eagle Breeding Survey - 1985".

#### Job 211.6 Salvage of Specimens

##### Objective

Salvage sick, injured or dead birds and addled eggs encountered during banding and other activities.

##### Procedures and Findings

See attached report by Charles Sindelar, "Wisconsin Bald Eagle Breeding Survey - 1985".

The following table illustrates the cause of bald eagle injuries and mortality in Wisconsin, October 1, 1984 to September 30, 1985:

<u>Cause</u>	<u>Injured</u>	<u>Dead</u>
traps	5	0
projectile	1	0
trauma	1	5 (2 nestlings)
disease	1	1
toxicity	0	2
drowned	0	1
emaciation	0	2 (2 nestlings)
unknown	1	13 (8 nestlings)
Total (33)	9	24

#### Job 211.7 Winter Inventory

In 1985, approximately 138 people from around the state counted 211 bald eagles. More input from the general public was received than in previous years. This resulted in a larger number and wider distribution of eagle observations.

The following table breaks down the eagle count:

1985 Midwinter Bald Eagle Survey Reporting Form

Number Adult Bald Eagles	163
Number Immature Bald Eagles	43
Number Unknown Bald Eagles	5
Total Bald Eagles Counted	211
Number Adult Golden Eagles	1
Number Immature Golden Eagles	1
Number Unknown Golden Eagles	0
Total Golden Eagles Counted	2
No. counties Surveyed	55
No. Survey Participants	138

Final 1985 Midwinter Bald Eagle Survey Results  
(From the National Wildlife Federation)

Region	1985 Total	1984 Total	1983 Total	1982 Total	1981 Total	1980 Total	1979 Total
Wisconsin	211	166	109	43	88	70	53

Summary

Reproduction was again very good. Occupied territories decreased slightly but because nesting success was better, production of young was roughly equal to last year.

Wisconsin's eagle population is likely still slowly increasing but Lake Superior eagles continue to experience problems.

Recommendations

Aerial surveys are necessary to assess management efforts, monitor population trends and identify active territories. If possible, the same individual should fly the surveys next year, which would facilitate the location of active nests, alternative nest and old nest sites.

Prepared by C. Sindelar and R. Jurewicz, edited by C. Gieck.

## BALD EAGLE PRODUCTIVITY IN WISCONSIN

Year	Number Active Territories	Number Successful Nests	Percent Successful Nests	Total Number Young	Av. No. Young Fledged/ Successful Nest	Av. No. Young Fledged/Active Nest
1962 <sup>1</sup>	25	17	68	28	1.65	1.12
1963	38	24	63	40	1.69	1.05
1964	27	17	63	24	1.14	0.89
1965	35	21	60	26	1.24	0.74
1966	63	43	68	70	1.63	1.11
1967	72	49	68	70	1.43	0.97
1968	67	46	69	73	1.59	1.09
1969	83	60	72	93	1.55	1.12
1970	82	47	57	78	1.66	0.95
Sub- Totals	492	324	66	502	1.55	1.02
1973 <sup>2</sup>	108	66	61	107	1.62	0.99
1974	109	59	54	103	1.75	0.94
1975	111	69	62	112	1.62	1.01
1976	146	89	61	139	1.56	0.95
1977	151	108	72	181	1.68	1.20
1978 <sup>3</sup>	140	97	70	168	1.73	1.20
1979	151	106	70	179	1.69	1.18
1980	175	131	75	231	1.8	1.3
1981	188	137	73	227	1.7	1.2
1982	207	145	70	251	1.7	1.2
1983	198	149	76	252	1.7	1.3
1984	224	169	70	279	1.6	1.2
1985	214	171	80	282	1.6	1.3

1. 1962-1970 data from: Sprunt, et al. 1973. Comparative productivity of six bald eagle populations. Trans. N. Am. Wildl. and Nat. Resour. Conf. 38: 96-106.
2. 1973-1977 data from: Madsen, C. R. (ed.) 1978. Bald Eagle production in the great lakes states: 1973-1977. U.S. Fish and Wildlife Service, Region 3, Fed. Bldg. Twin Cities, MN 55111.
3. 1978-1985 data from: Sindelar, C. Wisconsin Bald Eagle Breeding Survey. Annual reports by WI DNR, Bureau of Endangered Resources, P. O. Box 7921, Madison, WI 53707.



WISCONSIN BALD EAGLE BREEDING SURVEY - 1985

GENERAL REPORT

Done while temporarily employed by the State of Wisconsin  
WI DNR Bureau of Endangered Resources

by  
Charles Sindelar  
S47 W22300 Lawnsdale Rd.  
Waukesha, WI 53186  
October 1, 1985

## ACKNOWLEDGEMENTS

Many WI DNR personnel helped in varying degrees, but the most notable are Ronald Eckstein (Rhinelander), Raymond Vallem (Hayward), and Ronald Nicotera and Randle Jurewicz of the DNR Bureau of Endangered Resources (Madison).

U. S. Forest Service Biologists Anthony Rinaldi (Rhinelander) and Howard Sheldon (Park Falls) again funneled nest reports to me. Howard Sheldon did the April survey on the Chequamegon National Forest and A. Rinaldi did the April survey on the Nicolet National Forest.

Helen Cummings again furnished us with equipment and lodging and also generously donated the needed money to defray expenses of a much needed field assistant (volunteer).

Mid-State Airlines is to be thanked and congratulated for their policy regarding shipping eagles air freight -- "Eagles Fly Free on Mid-State!"

A big thanks to Dr. Patrick Redig for providing his services and facilities in taking care of the eaglets that Wisconsin furnished for "hacking".

Thanks also to Daniel Doberstein and Raymond Marvin who showed considerable patience and understanding while piloting the aircrafts in the never-ending struggle to safely get the job done, to Karen Kozie and Dr. Raymond Anderson for doing the April survey amongst the Apostle Islands, and to Connie Mueller, Robert Foster, and Rossaleous Hanson for completing the first check on the Mississippi River nests.

Thanks to Barbara and Spence Doty for the money to purchase a badly needed tape recorder to record "notes" on the aerial nest checks.

Many others helped in varying degrees. My sincere thanks to all.

## WISCONSIN BALD EAGLE BREEDING SURVEY - 1985

### INTRODUCTION

The 1985 Wisconsin Eagle Survey was again funded jointly by the U. S. Fish & Wildlife Service and the WI DNR. I was hired by the State of WI (WI DNR Bureau of Endangered Resources) to complete the survey.

David L. Evans was also hired by the Bureau of Endangered Resources (WI DNR) for the duration of the "ground checks", and Mary Jane Evans worked as his assistant. Although indispensable in the banding of nestlings, M. J. Evans was not officially hired. She worked on an "expenses only" basis funded wholly through the generous donations of Helen Cummings and administered by the Northeast WI Audubon Society.

Two strategically timed aerial surveys were again done to locate nests and check for activity and success.

Immediately following the second aerial survey two crews worked simultaneously for roughly a month ground checking primarily successful nests -- banding young and collecting addled eggs, feathers, injured young, and dead young.

### METHODS

Two aerial nest checks were done with Sindelar as the primary observer and WI DNR pilots, Daniel Doberstein and Raymond Marvin, for the majority of the flights. The primary aircraft used was a Cessna 180 with a C-172 on floats and a C-337 (Sky-master) used as special needs arose.

The first aerial check was done April 9, 10, 11, 12, 15, 16, 17, 18, and 19, and Anthony Rinaldi and Howard Shedon flew the Nicolet and Chequamegon National Forests as close to mid April as possible.

The April survey amongst the Apostle Islands was done by Karen Kozie and piloted by Dr. Raymond Anderson. Connie Mueller, U. S. Fish and Wildlife Service at McGregor, Iowa flew the Mississippi River on March 12 with a FWS 337, piloted by Robert Foster and co-piloted by Rossaleous Hanson. The second flight was done statewide (including the Nicolet and Chequamegon National Forests) on May 21, 22, 23, 24, 28, and 29.

No second flight was made on the Mississippi River, thus, all nests there were ground checked (climbed) to determine nesting outcome.

Ground checks began on 5-15 and continued on a more or less continuous basis until 6-21 and intermittently thereafter. These were accomplished with two teams working more or less continuous and simultaneous. These teams were, with few exceptions, Evans and Evans, and Sindelar and Eckstein.

### RESULTS

A total of at least 246 territories showed at least Some Degree of Activity of which 214 were Occupied. These figures dropped 5% and 10% respectively from last year. Successful sites and number of young produced remained virtually unchanged, while percent nest success increased by ten percentage points. What this means is fewer sites were occupied, but those pairs that did nest produced better.

Since Last year's report, twenty "new territories" were located and numbered and 25 "new nests" were located within previously known territories. It is my belief that WI's breeding population continues to slowly expand.

During the April aerial survey many problems surfaced, mostly because of the transition from many years of doing the survey with the same US FWS plane and pilot to utilizing strictly state DNR planes and pilots. Also, some FWS equipment, which

had been available to me for the past decade, was no longer available. I attempted to "Rube Goldberg" an old and badly abused personal tape recorder and as a result "lost" some data. Part of the April flight was not recorded. Results of this loss were minimized by the results of the second flight as well as reports from private parties on individual nests. Thus, only twelve territories must persist as to unknown degree of activity. Observations on the second flight indicated all of them were empty with no adults seen, but with no first check it will never be known which of them were occupied but failed or which exhibited some limited degree of activity or which were "inactive". These sites include:

BA-1	Bear Lake
BU-18	Dawn Lake
18c	(Totogatic Lake)
DU-5	St. Croix Flow. (East)
DU-7	(Wolf Springs)
DU-17	Upper St. Croix Lake (N)
SA-4	Chippewa Flowage
SA-8	Tag alder Creek
SA-24	Totogatic Fl.
SA-26	Brunet River
SA-30	Pine Point
WA-15	Tranus Lake
WA-16	Mud L.

At least some of these are "good" pairs so it is likely that many of them will be occupied in 1986. This bias could have artificially elevated the percentage of nest success and the average number of young per occupied nest. By the most extreme hypo-

thetical case, if all twelve had been occupied and failed, then the statewide percent of nest success would not be 80% but rather 76% and the average number of young per occupied nest would not be 1.3 but rather 1.2. I expect the truth lies somewhere in between.

# YOUNG TAKEN FOR HACKING OUT OF STATE

As part of a continuing effort to re-establish the eagles in areas where they have been extirpated, WI again furnished young eagles to other less fortunate states. Eight young were shipped as follows:

<u>DONOR SITE</u>				
<u>Nest #</u>	<u>Terr. Name</u>	<u>Band #</u>	<u>Shipped</u>	<u>Destination</u>
LA-4	Turtle River	629-17607	6-9	Monroe Reservoir, Hoosier National Forest, Indiana
WO-2	Ten Mile Creek	629-17609	6-9	Monroe Reservoir, Hoosier National Forest, Indiana
WA-24	Gruenhagen Bay	629-17553	7-17	Monroe Reservoir, Hoosier National Forest, Indiana
LI-7	Pine River	629-17608	6-9	Land-Between-the Lakes TN/KY border
VI-50	North Twin L.	629-17621	6-17	Land-Between-the-Lakes TN/KY border
ON-21	Tomahawk R.	629-17512	6-9	Reelfoot Lake NWR, TN
VI-40	Dunn L.	629-17636	6-17	Reelfoot Lake NWR, TN
ON-52	Minocqua L. (N)	629-17759	7-8	Mingo NWR, MO

Six of these were specifically chosen as follows: four were taken from broods of three (WO-2, LI-7, VI-50, ON-21), and two were taken from broods of two (LA-4, VI-40). Both birds at LA-4 were completely covered with pine pitch (we've never seen

this before). AT VI-40 we took the much smaller of the two because it acted and appeared very hungry. The remaining two young were taken as follows: one young was found on the ground under the nest at ON-52 on 7-8. It's nest mate remained on the nest. Because of its advanced age it could not be replaced in the nest as (1) it would not have stayed there, and (2) the climb would have caused its nest mate to jump. It could not be left on the ground because of its proximity to a developed area. One young was found on the ground near nest WA-24 on 7-17 and taken for unknown reasons. It was the only young in this nest, thus reducing its outcome to "nesting failure".

#### EGGS COLLECTED

Incidental to ground checks nine addled eggs were collected from the following sites:

BU-14	Grettum Fl.
ME-3	Neopit
BU-10	Nicaboyne L.
ON-42	Planting Ground L.
DN-5	Sand Creek
POR-1	DU-Bay Dam
WA-8	Slim Creek
SA-35	Berg Property
ON-31	Pelican River

It is hoped that these will be analyzed for chemical contaminants, and that egg shells will be compared with pre-DDT means.

# FEATHERS COLLECTED

In response to recent studies showing that heavy metals are stored in feathers, we collected feather samples from 35 sites. These were primarily naturally molted adult feathers found in close proximity to nest sites. Collections were made at the following sites:

VI-5	Big Crooked L.	ON-9	Tomahawk L.
VI-8	High L.	ON-15	Kaubashine Creek
VI-11	Sanborn L.	ON-28	(Seed L.)
VI-27	(Keego L.)	ON-29	Columbus/One Stone
VI-34	Kentuck L. (N)	ON-30	Garth L.
VI-39	Harris L.	ON-34	Rainbow Fl.
VI-41	Forest L.	ON-46	Sugar Camp Cr. Keg
VI-42	(Lost Canoe L.)	ON-48	Stone L.
VI-46	(Kentuck L. S.)	ON-49	Horsehead L.
VI-50	N. Twin L.		
VI-66	Tenderfoot L.	FO-3	Quartz/Howell L.
VI-69	Fish Trap L.	MR-3	Half Moon L.
VI-72	Aurora L.		
VI-73	Conover	WO-2	Ten-Mile Cr.
VI-76	Haunted Island	LI-6	Alexander Rd.
IR-8	Flambeau Fl.	FL-5	Pine R.
IR-17	Little Bear R.	FL-6	Whisker L.
IR-20	Flambeau Fl.		
IR-30	Flambeau Fl.	MT-3	Cauldron Falls Res.

Even more meaningful for this purpose will be feathers from the dead nestlings we



collected because their feathers grew from food obtained at known locales (AS-12, AS-20, ON-45, VI-5, PR-4, and MT-3).

#### BANDING

We again put forth a Herculean effort to band the current year's crop of nestlings. Two hundred and fifty nine were banded -- 92% of the state's known production, bringing the total banded in WI to roughly 2,500. Although it is hoped this can continue in future years, it is unknown at this time if man power will be available in 1986 to again band a high percentage of the year's crop.

We have identified a number of banded adults in the breeding population. We presently have no idea of the age of our breeders nor age specific mortality rates. I am contemplating trapping and identifying these marked "known age" individuals to help construct a better population model.

#### REMAINS OF DEAD 1984 YOUNG (NEVER FLEW)

- SA-47      Couderay River, 6-10. Feathers of 1984 young found in nest. Primaries "out of sheath"  $\pm$  8 inches. At time of banding in 1984 (6-9) feathers had been  $\pm$  4 inches, thus young lived some time after banding.
- AS-23      Hell Hole Creek, 6-17. Remains of at least one and possibly both 1984 youngsters. Primaries close to "hard pinned", thus deaths occurred near fledging. On 6-17 when banded in 1984 the two young were exceptionally small (young) for that date with primary wing feathers of only  $\frac{1}{2}$ " and 1" respectively. Thus, death likely occurred in August of 1984.

SICK NESTLINGS

- PR-1 Elk Musser, 6-5. The only nestling had an apparent Avian Pox growth on cere.
- DN-3a Hay Creek, 6-13. Nares plugged with mucus and feces (cold/pneumonia?)
- WA-22 Shell Lake, 6-16. Nares plugged with mucus (cold/pneumonia?)
- IR-14 Bear River, 6-20. One of two young had an apparent Avian Pox growth on cere.

DEAD YOUNG (1985 YEAR CROP) ENCOUNTERED WHILE BANDING

- AS-12 North Twin Island (Apostles), 6-19, one dead young collected for analysis.
- AS-20 Michigan Island (Apostles), 6-19, one dead young collected for analysis; nest mate seemed o.k..
- AS-23 Hell Hole Creek, 6-17, remains of one dead young; nest mate seemed o.k.
- SA-38 Grindstone L., 6-12, remains of two dead young.
- ON-45 Tomahawk R., 6-2, nest on ground; one dead young collected; nest mate o.k.; placed on platform 6-3.
- VI-5 Big Crooked L., 6-13, one of two young died in a fall from nest (collected)
- VI-39 Harris L., 6-13, remains of dead young found in nest, two nest mates seemed o.k.
- ON-47 McCormick L., 6-3, remains of two dead young.

- PR-4 Flood Creek, 6-18, remains of one dead young (collected); nest mate seemed o.k.
- MT-3 Cauldron Falls Res., 6-3, one of two young dead for  $\pm$  1 week (feathers collected).
- SA-13 Deer L., 6-6, minimal remains of dead young in nest; two nest mates seemed o.k.

#### YOUNG THAT DIED AFTER BANDING

- VI-21 Wild Rice Lake -- a single young died in July hailstorm with nine inch primaries; on 6-6 primaries  $\pm$  1 inch out of sheath when banded.

#### THE LAKE SUPERIOR "PROBLEM"

The optimism with which I spoke in my 1984 report regarding the Lake Superior eagles has now all but disappeared. This year fewer Lake Superior eagles showed up at nests and fewer pairs nested. Fewer young were raised and again young died mysteriously in nests prior to fledging.

On WI's mainland Lake Superior shore only four pairs even made a partial showing with two of these attempting to nest and only one of which produced (two young).

This year for the first time that I recall we had no eagle activity at nests along the entire Douglas Co/Lake Superior shoreline. Perhaps contaminants are higher as one approaches the Duluth/Superior area?

The Bayfield County/Lake Superior mainland shore had one site that produced

two young (BY-19) and a second site (BY-21) that exhibited only minimal activity (S.D.).

The Ashland County/Lake Superior mainland shore also had but one occupied territory (AS-18) but it failed. A second site (AS-21) exhibited minimal activity (S.D.).

Amongst the Apostles three pairs again nested, producing two young, and a fourth newly discovered pair showed at least some limited activity. Karen Kozie's intensive study of these birds is continuing but already has turned up some interesting clues. They are experiencing a very rapid adult turn-over and they are eating gulls (perhaps highly contaminated?). In 1984 two Apostle Island young died prior to fledging, and again this year two young died before fledging.

A summary of WI's total Lake Superior shoreline is as follows:

Five occupied territories of which three were successful in producing four young, and three additional territories exhibited some minimal activity (S.D.). Although admittedly a very small sample size, they produced (60% nest success, .8 yg/occ., and 1.3 yg/succ.), well below statewide averages (80, 1.3, 1.6).

#### SUMMARY

Reproduction was again very good. Occupied territories decreased slightly but because nesting success was better, production of young was roughly equal to last year.

WI's eagle population is likely still slowly increasing but Lake Superior eagles continue to experience problems.

WISCONSIN BALD EAGLE REPRODUCTIVE COMPARISON  
(1973-1985)

	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
Terr. w/0 least S.D. of Activity					154	166	172	196	202	234	235	260	246
Occ. Terr.	108	107	111	149	151	140	151	175	188	207	198		214
Succ. Terr.											149	169	171
% Nest Succ.	61%	55%	62%	61%	72%	70%	70%	75%	73%	70%	76%	70%	80%
# Yg/Occ. Terr.	.94	.94	1.0	.95	1.2	1.2	1.2	1.3	1.2	1.2	1.3	1.2	1.3
# Yg/Succ. Terr.	1.6	1.7	1.6	1.6	1.7	1.7	1.7	1.8	1.7	1.7	1.7	1.6	1.6
# Yg Produced	107	101	112	139	181	168	179	231	227	251	252	278.8	281.9

WISCONSIN BALD EAGLE BREEDING SURVEY - 1985

STATEWIDE  
80% nest success  
1.3 yg/occ. terr.  
1.6 yg/succ. terr.

SUCCESSFUL TERRITORIES

	<u>1 yg</u>	<u>1.6 yg</u>	<u>1.7 yg</u>	<u>2 yg</u>	<u>3 yg</u>
NorthCentral Dist.	23	--	1	43*	3*
NorthWest Dist.	39*	1	--	42	6
Lake Michigan Dist.	4	--	--	2	--
WestCentral Dist.	3	1	--	1	1
Southern Dist.	--	--	--	1	--

STATE TOTAL      69\* (40%)      2      1      89\* (52%)      10\* (6%)

\* It should be noted that four broods of three, three broods of two, and one brood of one were each reduced by one for out of state hack projects. These figures already reflect the reduction.

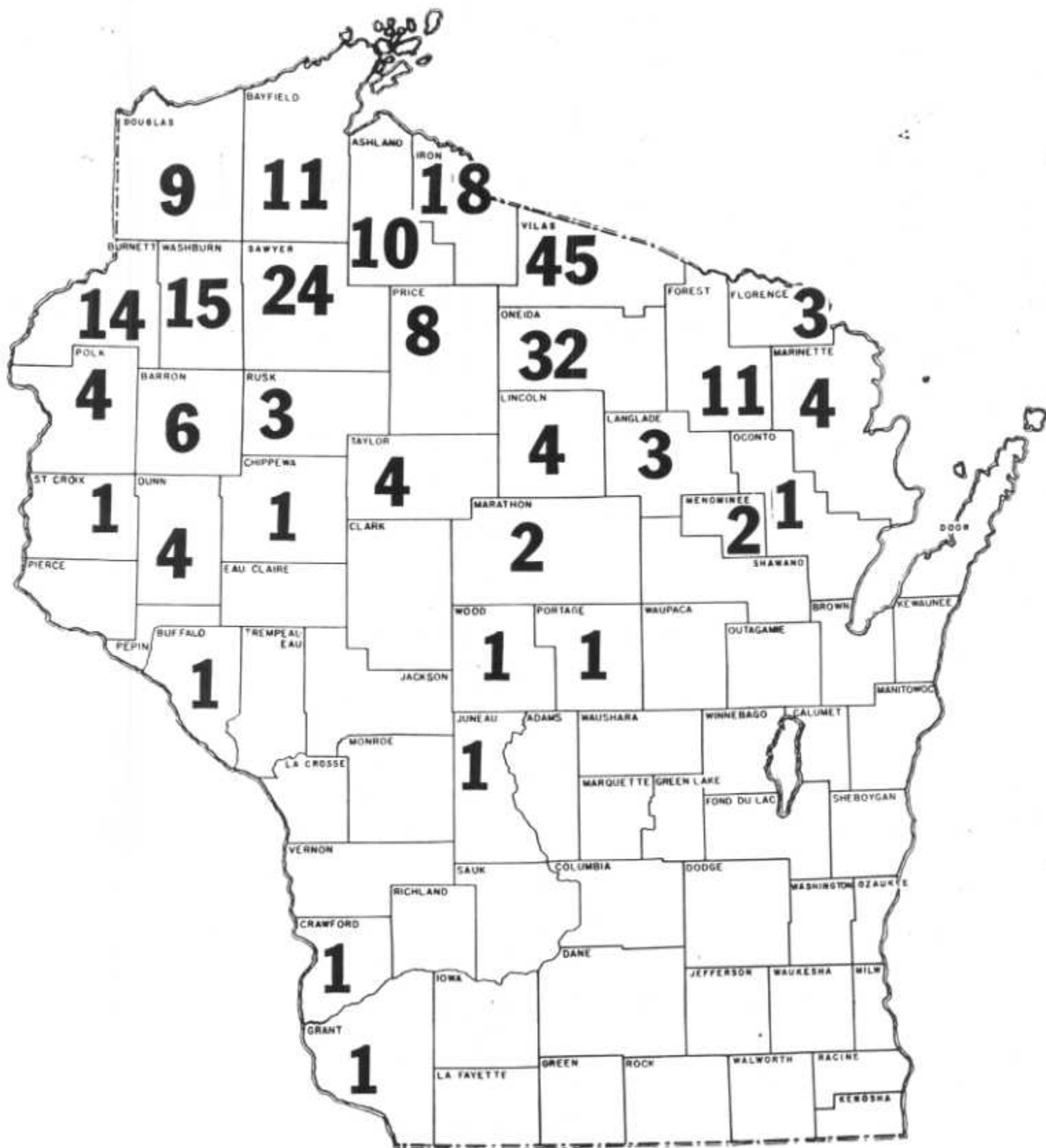
# WISCONSIN BALD EAGLE BREEDING SURVEY - 1985

## Breakdown by County and State Totals

COUNTY	Terr. w/@ least S.D. of Activity	Occ. Terr. w/ Known Outcome	Succ. Terr.	# of Yg. Produced
Ashland	10	8	6	7
Barron	6	4	3	6
Bayfield	11	10	10	15
Buffalo	1	1	1	3
Burnett	14	10	10*	17.6*
Chippewa	1	1	0	0
Crawford	1	1	1	1
Douglas	9	8	8	11
Door	0	0	0	0
Dunn	4	4	4*	5.6*
Florence	3	3	2	3
Forest	11	9	7	12
Grant	1	1	1	2
Iron	18	16	10	14
Jackson	0	0	0	0
Juneau	1	1	0	0
Langlade	3	2	1	1
Lincoln	4	3	3	4
Marathon	2	1	1	3
Marinette	4	4	3	4
Menominee	2	1	0	0
Oconto	1	1	1	1
Oneida	32	29	22	37
Polk	4	3	3	6
Portage	1	1	0	0
Price	8	8	6	8
Rusk	3	3	2	4
Sawyer	24	21	17	28
St. Croix	1	1	0	0
Taylor	4	3	0	0
Vilas	45	40	35**	60.7**
Washburn	15	15	13	26
Wood	<u>1</u>	<u>1</u>	<u>1</u>	<u>2</u>
TOTALS	246	214	171	281.9

\* Includes one succ. terr. estimated to contain 1.6 yg

\*\* Includes one succ. terr. estimated to contain 1.7 yg.



WISCONSIN BALD EAGLE TERRITORIES SHOWING AT LEAST SOME DEGREE OF ACTIVITY IN 1985